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PROPOSED TENATIVE DEVELOPMENT PLANS
ENCINITAS BURN SITE
SWIS # 37-CR-0021

The County of San Diego, Solid Waste Local Enforcement Agency (LEA) is certified by the California Integrated Waste Management Board (CIWMB) to enforce the state solid waste laws and regulations at solid waste disposal sites including closed landfills and old burn sites. The LEA has been informed of tentative development possibilities for the Encinitas burn site. The LEA has prepared this letter to help guide you through the requirements for post-closure land use changes, such as development of this site or any other burn site.

General Regulatory Requirements for post closure land use changes

In accordance with Title 27, California Code of Regulations (27CCR), Sections 21100 and 21190, all proposed projects (post closure land use changes) shall implement provisions of the regulations as required by the LEA and shall take into consideration the following regulatory requirements, presented in their entirety directly from Title 27, prior to submittal for approval by the LEA (as applicable):

(a) Proposed post-closure land uses shall be designed and maintained to:

(1) protect public health and safety and prevent damage to structures, roads, utilities and gas monitoring and control systems;

(2) prevent public contact with waste, landfill gas and leachate; and

(3) prevent landfill gas explosions.

(b) The site design shall consider one or more proposed uses of the site toward which the operator will direct its efforts, or shall show development as open space, graded to harmonize with the setting and landscaped with native shrubbery or low maintenance ground cover.

(c) All proposed post-closure land uses, other than non-irrigated open space, on sites implementing closure or on closed sites shall be submitted to the LEA, RWQCB, local air

district and local land use agency. The LEA shall review and approve proposed post-closure land uses if the project involves structures within 1,000 feet of the disposal area, structures on top of waste, modification of the low permeability layer, or irrigation over waste.

(d) Construction on the site shall maintain the integrity of the final cover, drainage and erosion control systems, and gas monitoring and control systems. The owner or operator shall demonstrate to the satisfaction of the LEA that the activities will not pose a threat to public health and safety and the environment. Any proposed modification or replacement of the low permeability layer of the final cover shall begin upon approval by the LEA, and the RWQCB.

(e) Construction of structural improvements on top of landfilled areas during the post-closure period shall meet the following conditions:

(1) automatic methane gas sensors, designed to trigger an audible alarm when methane concentrations are detected, shall be installed in all buildings;

(2) enclosed basement construction is prohibited;

(3) buildings shall be constructed to mitigate the effects of gas accumulation, which may include an active gas collection or passive vent systems;

(4) buildings and utilities shall be constructed to mitigate the effects of differential settlement. All utility connections shall be designed with flexible connections and utility collars;

(5) utilities shall not be installed in or below any low permeability layer of final cover;

(6) pilings shall not be installed in or through any bottom liner unless approved by the RWQCB;

(7) if pilings are installed in or through the low permeability layer of final cover, then the low permeability layer must be replaced or repaired; and

(8) periodic methane gas monitoring shall be conducted inside all buildings and underground utilities in accordance with section 20933 of Article 6, of Subchapter 4 of this Chapter.

(f) The LEA may require that an additional soil layer or building pad be placed on the final cover prior to construction to protect the integrity and function of the various layers of final cover.

(g) All on site construction within 1,000 feet of the boundary of any disposal area shall be designed and constructed in accordance with the following, or in accordance with an equivalent design which will prevent gas migration into the building, unless an exemption has been issued:

(1) a geomembrane or equivalent system with low permeability to landfill gas shall be installed between the concrete floor slab of the building and subgrade;

(2) a permeable layer of open graded material of clean aggregate with a minimum thickness of 12 inches shall be installed between the geomembrane and the subgrade or slab;

(3) a geotextile filter shall be utilized to prevent the introduction of fines into the permeable layer;

(4) perforated venting pipes shall be installed within the permeable layer, and shall be designed to operate without clogging;

(5) the venting pipe shall be constructed with the ability to be connected to an induced draft exhaust system;

(6) automatic methane gas sensors shall be installed within the permeable gas layer, and inside the building to trigger an audible alarm when methane gas concentrations are detected; and

(7) periodic methane gas monitoring shall be conducted inside all buildings and underground utilities in accordance with Article 6, of Subchapter 4 of this chapter (section 20920 et seq.).

Remedial Options and Plans Required by LEA

As was discussed in a meeting on January 27, 2009, there are several remedial options available that would allow development of the site including, but not limited to:

- clean closure
- capping with an engineered cap
- consolidation and capping (with removal of all ash from portions of the site
- combinations of the above

Depending on the ultimate remedial action chosen and the land use activities developed at the site, ensure that the following information is included in any proposal / work plan:

1. The presence of the burn ash is to be disclosed to contractors and identified on plans.

2. A plan for managing expected and unexpected wastes during excavation, trenching and installation of utilities.

3. An approved Community Health and Safety Plan will be required. This may be submitted as an appendix to the proposed project work plan or as a stand alone document. Due to the undocumented nature of the waste at the site, inclusion of landfill gas monitoring during the excavation phase / trenching activity is a mandatory component.

4. Describe how the proposed development will not interfere with routine maintenance or impact drainage of the any remaining portion of the burn site. Include discussion on overall site drainage.

5. Provide a project time line for implementation of various aspects of the project.

6. Provide evidence of compliance with the Californial Environmental Quality Act (CEQA).

Postclosure Maintenance

If any amount of burn ash is to remain on the site, ensure that the following information, and a post closure maintenance plan (PMP), is included in any proposal. This is not necessary if all of the burn ash will be excavated and removed from the site (clean closed). Be reminded that the LEA can not certify that a site has been cleaned closed (no longer a site). Only the Department of Toxic Substance Control (DTSC) or the Regional Water Quality Control Board can certify clean closure.

Pursuant to 27CCR, Section 21110(d), the LEA may require the owner or operator of a closed disposal site to prepare and implement an approved PMP that addresses potential threats posed by the site to public health and safety and the environment. A separate PMP may be required for each development / owner / use of the site.

You will need to submit to the LEA a site / project specific PMP for approval. The purpose of the PMP is to: (a) provide a detailed plan and schedule for long-range maintenance and monitoring of the site for the protection of public health, safety and the environment, and (b) direct the responsible parties to coordinate their activities, allocate adequate resources, and assign responsibility for the required tasks identified below.

At a minimum, critical elements of a PMP include:

1. An emergency response plan (27CCR21130);
2. Site security (27CCR21135);
3. Final Grading (27CCR21142);
4. Drainage and Erosion Control (27CCR21150);
5. Post-closure Maintenance (27CR21180)
6. The persons, companies, or agencies responsible for each aspect of post-closure maintenance, and their addresses and phone numbers.
7. As built description of any monitoring and control systems at the site.
8. Detailed descriptions of the methods, procedures and processes that will be used to maintain, monitor, and repair any engineered cover/cap over the burn ash. Include a description of the funding mechanism that will allow the maintenance of the site into perpetuity.
9. land use covenants/title restrictions and how they will be enforced to prevent future disturbance of the remaining burn ash
10. A summary of the requirements for reporting the results of major maintenance actions.
11. Location maps indicating property boundaries, project boundaries and the existing limits of waste. A location map shall also be included showing the general location of any burn ash to remain onsite and details of any cap system proposed.
12. A location map of any monitoring and control systems including drainage and erosion control systems
13. A description of post-closure land uses and as builts of the final development, including all utilities (at the completion of the project).

14. Maintenance activities and monitoring schedules for:

- Site security,
- Cover and grading,
- Drainage and erosion control measures,

As we discussed, it is always preferable, in the case of capping or consolidation and capping, that burn ash be placed under a hardscape (such as a parking lot) without any utilities. The placement of utilities through capped burn ash poses a potential problem if upgrades, repairs or other work is necessary to the utilities. The PMP must detail a contingency plan in the event utilities placed in the area of the burn ash needs to be disturbed.

This summarizes the general requirements necessary for potential development of a burn ash site. Additional site specific requirements may be required based on site specific factors. If you have any questions, please call me at (858) 694-2801.

Sincerely,

MELISSA PORTER, Environmental Health Specialist III
Local Enforcement Agency

ecopy: Rodney Lorang, County Counsel
Vicky Gallagher, DPW landfills

cc: Greg Locke, County Real Estate